Work Orde				*1	082	18*							Page 1
Item ID: Revision ID: Item Name:	D3121-23 Bearing		,	Accept	*	N900	040	100)* s	Setup St	art op	*N:	S1*
Start Date: Required Date: Reference:	10/08/13	Start Qty: 60.00 Req'd Qty: 60.00	*60* *60*			Cust Item Customer:						ı u.	
Approvals:		•	Date: \\(3 - (0 - 1 \) Date:):		ate:		F		art op :	*N *N	R1* R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Ho		Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty		eject umber	Insp. Stamp
Draw Nbr	Re	vision Nbr											
D3121	Rev	v E											
*100 *100* Purchasing Purchasing		PURCHASING Memo Issue P/O: <u>c</u> SKF P/N: 6	31664 Bearing as p	0.00 0.00 er Dwg D3121F -ZZMaterial relo	ossible Suppli ease note is rec	er: uired			CZ	/ 13/	101	110	60
*110 *110* Packaging Packaging		Receive & Inspect for Da Memo Ensure Mate	amage & Mat'l Certs erial Release Note is attache	0.00 0.00					(00×		·- -	13	SP - 10-
*120 *120*		QC6- Inspect dimension	s to drawing	0.00	B 10	11			60	· <u></u> ·			

Inspect diimensions as per Dwg D3121 and attached certification Dwg Rev _____

Memo

120

Quality Control

											DQA:	Date:	
NCR: Y	es /	No				WORK ORDER NON-C	O	NFORM	MANCE / UPD	DATE			
										·	QA Closed:	Date:	
Work Orde	er:					DISPOSITION				AGAINST DE	PARTMENT,	PROCESS	
Part No. NCR No.						Rework Scrap Use-as-is Work Order Update Rework Skid-tube Machining Small Fab Thermoforming Large Fab Composite			1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other		
Root					Descri	ption of work order update	1	nitial	Acti	on	Sign &		
Cause		Date	Step	Qty	•	or Non-conformance	Ch	ief Eng	Descri	ption	Date	Verification	QC Inspector
Doc/Data													
Equip/Tooling										:			
Operator													
Material													
Setup				Ì									
Other													
Process					ļ								
Supplier					ł								
Training													
Unapproved				<u> </u>									
						F/	AUL	T CATE	GORY				
Landi	ng Gea	r				General	_				-	ـــــنو	-
	Ве	nding				Bend	Ш	Grain		Ĺ	Ovalized		Pressure/Forced
	Ce	ntre No	ot Concer	ntric to	o/s	BOM/Route	Ш	Hardwa	re	L	Over/Under	tolerance	Temperature/Cure
	Cr	acks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	it [Weld
	Cr	ushed/0	Crimped			Burrs		Instruct	ions Incomplete/U	nclear	Part Lost/Mi	ssing	Wrong Stock Pulled
	Cu	ffs				Contamination		Mainte	nance		Part Moved	_	
Heat Treat					Positioned Wrong								

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Power Loss/Surge

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

Finish

Folio

11:12:43 AM	1 <u></u>							
D3121-23 Bearing			Accept	*N900	04010	A Setu	ip Start	14.71
10/08/13 10/08/13	Start Qty: 60.00 Req'd Qty: 60.00	*60* *60*		Cust Item II Customer:	D:	Dur	Start	
Process Pla	an:	Date:	Tooling:	Da	te:	Kun		"INK I"
QC:		Date:	SPC (Y/N):	Da	te:	-	Stop	*NR2*
D	Operation Description	ck Location: STA 35	Set Up/ Run Hours	Tool ID	Tool # Plan Code	-	Qty	Reject Insp. Number Stamp
	Memo	on Boomion Trans	0.00			_(dO)X _	28 9-89	13-10-11
	OC21 Final Inspection	Work Order Palagoa	0.00					
	Memo	WOIK OTHER RETEASE	0.00			WC3	5 13	MCS 13-10-1
	D3121-23 Bearing 10/08/13 10/08/13 Process PI	Bearing 10/08/13 Start Qty: 60.00 10/08/13 Req'd Qty: 60.00 Process Plan: QC: Operation Description Identify as per dwg & Sto	D3121-23	D3121-23	Date Set Up Tool ID	D3121-23	D3121-23	D3121-23

												DQA:	Dat	te:	
NCR:	Yes	/ No				WORK ORDER NON-O	100	NFOR	MANCE / UP	DATE		•			
										<u></u>		QA Closed:	Dat	te:	
Work Ord	er:					DISPOSITION		AGAINST D				PARTMENT	PROCESS		
	•••					Rework	1		Skid-tube	Crosstube		Water Jet			Engineering
Part	No.					Scrap				Small Fab		Pro	d. Eng. Coor.		Quality
						Use-as-is	1	Therr	noforming	Finishing		Rec/Stor	e/Packaging		Other
NCR No.				Work Order Update]		Large Fab	Composite			Supplier[
			1	1	<u> </u>		, 		1			[c: 0]		_	
Root				_		ption of work order update		nitial	I	tion		Sign &	_		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Desc	ription		Date	Verification	1	QC Inspector
Doc/Data															
Equip/Tooling															
Operator															
Material				:			İ								
Setup															
Other									: 						
Process															
Supplier															
Training															
Unapproved				<u> </u>											
						F	AUL	T CATE	GORY						
Land	ing (Gear				General		_							
Bending Bend					Grain				Ovalized			Pressure/Forced			
Centre Not Concentric to O/S BOM/Route			Hardware				Over/Under tolerance		Temperature/Cure						
—				Broken/Damaged	 					-			Weld		

Instructions Incomplete/Unclear

Maintenance

Out of Calibration

Out of Sequence

Outside Dimensions

Mislabeled

Misread

Offset

Part Lost/Missing

Positioned Wrong

Power Loss/Surge

Part Moved

Wrong Stock Pulled

Other

Turning Sequence

Wave/Twist in Tube

Ripples in Bend

Crushed/Crimped

Inspection Strip in Tube

Torque Waves in Extrusion

Cuffs

Heat Treat

Burrs

Contamination

Countersink

Cut Too Short

Drill Holes

Drawing

Finish

Folio

Picklist Print

October-08-13 11:12:43 AM

Work Order ID:

108218

Parent Item:

D3121-23

Parent Item Name:

Bearing

Start Date: 10/08/13

Required Date: 10/08/13

Page 1

Start Qty: 60.00

Required Qty: 60.00

Comments:

IPP A: 04.02.19 New Issue KJ/DS

IPP Rev:B ECN 1060 07-11-12 DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
6900ZZ Bearing		Purchased	No	<u>.</u>		100	Each	0.0000	1		? © X		

SP 13-10-11

NCR: Yes / No WORK ORDER NON-CONFORMANCE / UPDATE															
											QA Closed:	Date:			
Work Orde	er:					DISPOSITION		AGAINST DEPARTMENT/PROCESS							
Part No						Scrap Machining Small Finish		Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other				
Root Desc			Descri	ption of work order update		nitial	Act	ion	Sign &						
Cause	e Date Step Qty		(or Non-conformance	Ch	ief Eng	Descr	iption	Date	Verification	QC Inspector				
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved	Data /Tooling ator crial p crss olier ning														
							AUL	T CATE	GORY						
Bending Centre Not Concentric to O/S Cracks Crushed/Crimped Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion		General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		Instruct Mainte Mislabe Misread Offset Out of (on Incomplete ions Incomplete/U enance eled i	inclear	Ovalized Over/Under Part Incorred Part Lost/Mi Part Moved Positioned V Power Loss/	ssing Vrong	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other						
Turning Sequence		Finish	1	Out of Sequence											

Outside Dimensions

DQA:

Date:

Wave/Twist in Tube

Folio



(

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DESIG	4	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHEC	KED	APPROVED	DRAWING NO. REV. E D3121 SHEET 1 OF 10
DATE			TITLE SCALE
07.	11.07		BRACKET ASSEMBLY 1:2
Α		02.04.15	NEW ISSUE
В		03.01.16	ADD RIDGES; ADD MAT'L PROP; FIX P/N ADD -141/-143/-144/-145/-146
С		04.02.17	ADD CLEARANCE; USE -241 BEARING
D		06.05 <i>.</i> 17	D3121-25 CAP WAS 1.024, NOW 1.000
Е		07.11.07	ADD TOLERANCE TO 0.032 (DETAIL B)

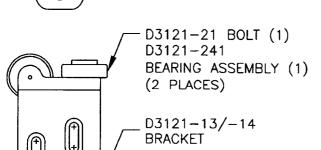


- D3121-2	21 BOLT (1)
D3121-2	241
BEARING	ASSEMBLY (1)

D3121-11 BRACKET

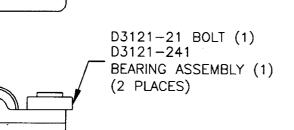
D3121-041 BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-33)



D3121-043 (SHOWN) / D3121-044 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-37/-38)



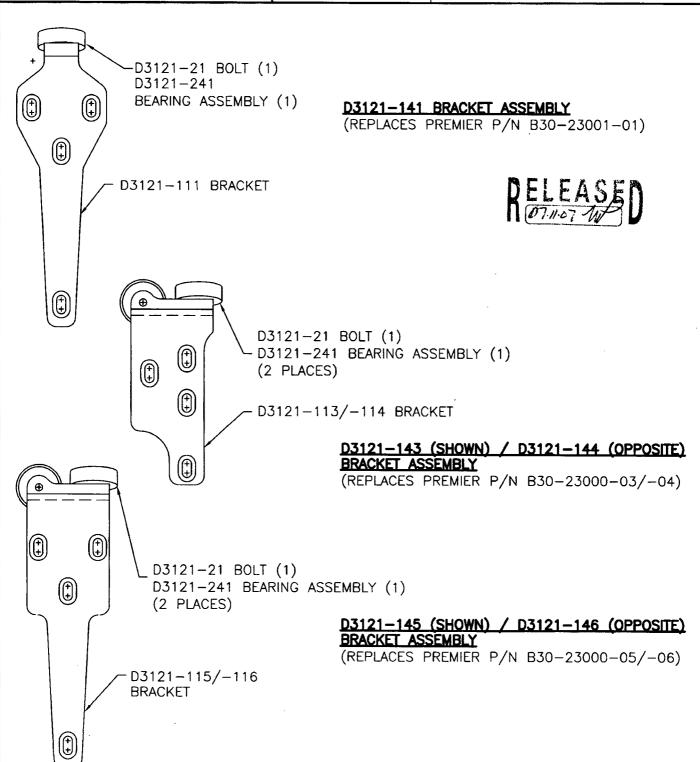
D3121-15/-16 BRACKET

D3121-045 (SHOWN) / D3121-046 (OPPOSITE) BRACKET ASSEMBLY

(REPLACES PREMIER P/N B30-23000-35/-36)



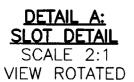
DESIGN	DRAWN BY	DART AEROSP, HAWKESBURY, ONTARI	
CHECKED	APPROVED	DRAWING NO.	REV. E
4	1	D3121	SHEET 2 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2

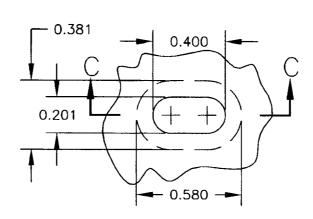


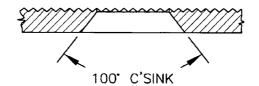
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CHECKED	APPROVED,	DRAWING NO.	REV. E				
#	#	D3121	SHEET 3 OF 10				
DATE		TITLE	SCALE				
07.11.07		BRACKET ASSEMBLY	1:1				



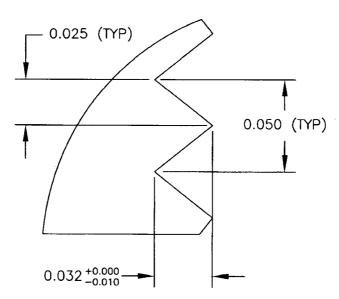






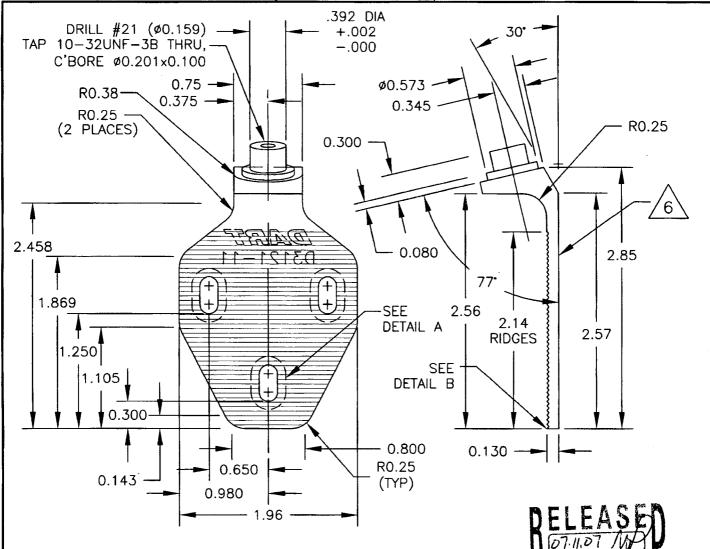


DETAIL B: RIDGE DETAIL PARTIAL SECTION SCALE 1:20





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1	CHECKED	APPROVED,	DRAWING NO.		REV. £
	#	-#	D3121		SHEET 4 OF 10
	DATE		TITLE		SCALE
	07.11.07	-	BRACKET	ASSEMBLY	1:1



D3121-11 BRACKET

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE = 150 ksi

MIN YIELD TENSILE = 100 ksi

- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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CHECKED	APPROVED	DRAWING NO.	REV. E
4	-#	D3121	SHEET 5 OF 10
DATE		TITLE	SCALE
07.11.07		BRACKET ASSEMBLY	1:2



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DABT

D3121-13

1.220 ├ --- 1.800

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2.63

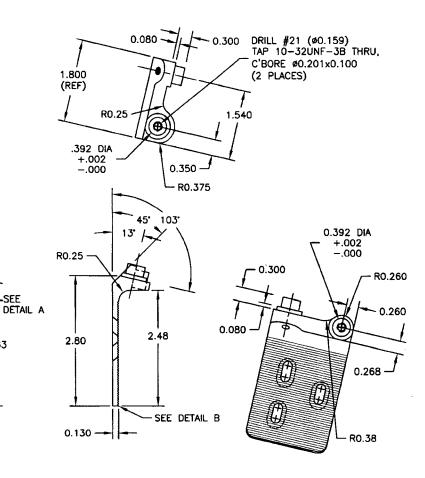
<u>6</u>

0.400

1.280

0.960

0.330 -



D3121-13 BRACKET (SHOWN) D3121-14 BRACKET (OPPOSITE)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)
 MIN ULTIMATE TENSILE STRENGTH = 150 ksi
 MIN YIELD TENSILE STRENGTH = 100 ksi
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N & LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

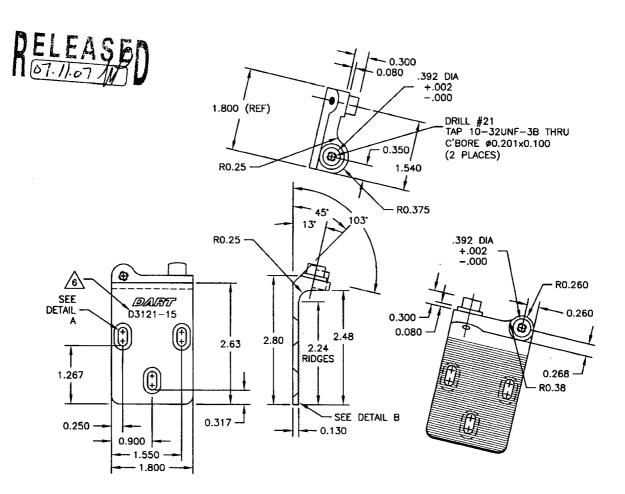
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812801



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ना		D3121	SHEET 6 OF 10	
DATE		TITLE	SCALE	
07.11.07		BRACKET ASSEMBLY	1:2	



D3121-15 BRACKET (SHOWN) D3121-16 BRACKET (OPPOSITE)

1) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B) MIN ULTIMATE TENSILE = 150 ksi

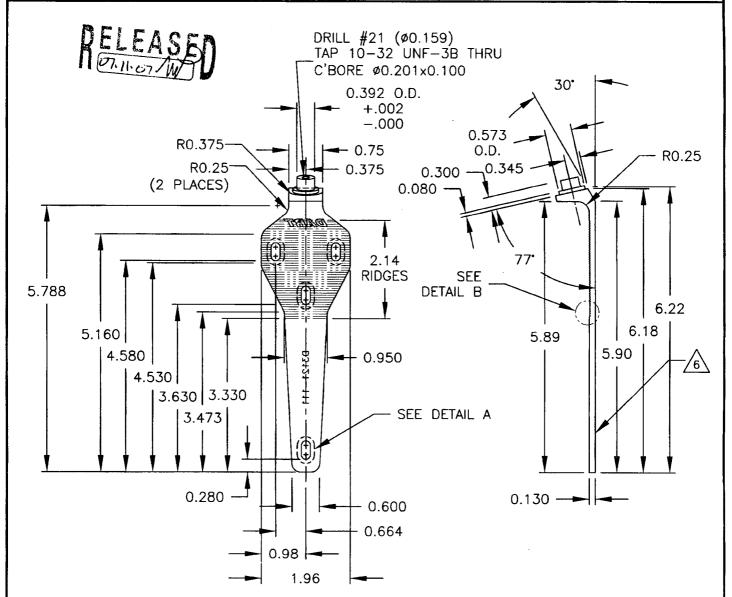
MIN YIELD TENSILE = 100 ksi

- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) ENGRAVE DART P/N AND LOGO AS SHOWN
- 6) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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CHECKED	APPROVED	DRAWING NO.	REV. E	
#		D3121	SHEET 7 OF 10	
DATE		TITLE	SCALE	
07.11.07		BRACKET ASSEMBLY	1:2	



D3121-111 BRACKET

- 1) REPLACES PREMIER P/N B32-23001-11
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643 (REF DART SPEC. M17-4-B)

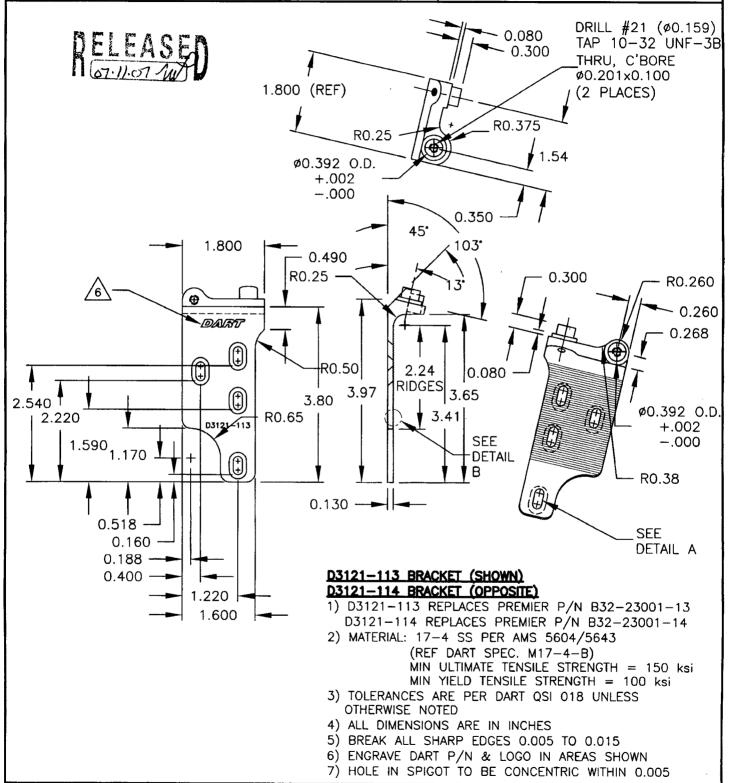
MIN ULTIMATE TENSILE = 150 ksi MIN YIELD TENSILE = 100 ksi

- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHEWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) ENGRAVE DART P/N & LOGO IN AREAS SHOWN
- 7) HOLE IN SPIGOT TO BE CONCENTRIC WITHIN 0.005

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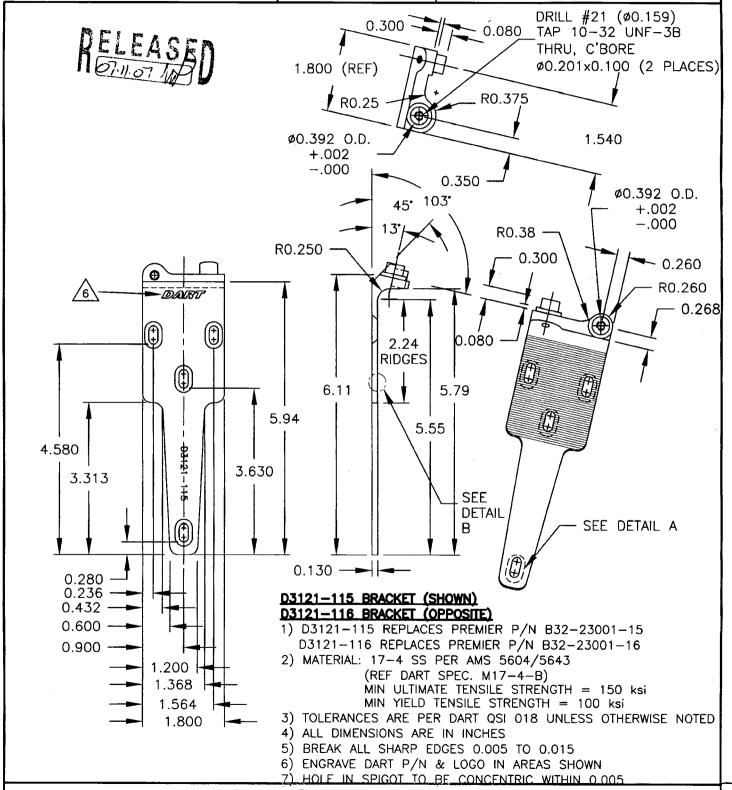
DESIGN #	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA		
CHECKED	APPROVED	DRAWING NO.	REV. E	
4	-#	D3121	SHEET 8 OF 10	
DATE		TITLE	SCALE	
07.11.07		BRACKET ASSEMBLY	1:2	



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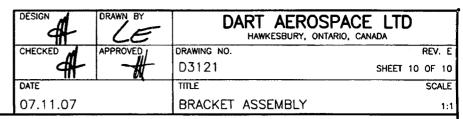


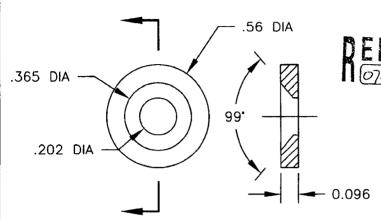
DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA			
CHECKED	APPROVED,	DRAWING NO.	REV. E		
#	-#	D3121	SHEET 9 OF 10		
DATE		TITLE	SCALE		
07.11.07		BRACKET ASSEMBLY	1:2		



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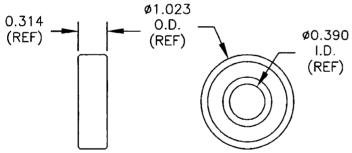






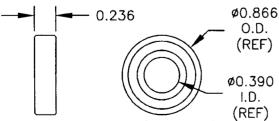
D3121-17 WASHER (SCALE 2:1)

- 1) REPLACES PREMIER P/N B32-23001-17
- 2) MATERIAL: AISI 303 SS ROUND BAR, ANNEALED (REF DART SPEC. M303R)
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



D3121-19 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: KING BEARING P/N 6000-2ZJ/EM 1) MATERIAL: DELRIN ROD, Ø1.25 FAFNIR P/N 9100KDD
- 2) ALL DIMENSIONS ARE IN INCHES



D3121-23 BEARING (SCALE 1:1)

- 1) POSSIBLE SUPPLIER: SKF P/N 61900-2Z OR KML P/N 6900-ZZ
- ALL DIMENSIONS ARE IN INCHES

D3121-21 BOLT (SCALE 1:1)

- 1) MATERIAL: AISI 303 SS HEX, ANNEALED (REF DART SPEC. M303H0.500)
- 2) FINISH: NONE

0.375 -

3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

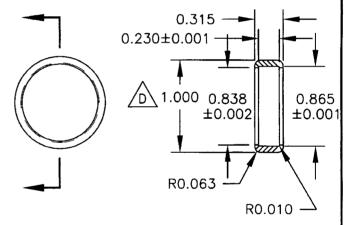
TAP 10-32

UNF-3A

0.050 TO 0.060

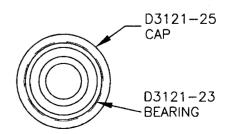
0.080

- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015



D3121-25 CAP (SCALE 1:1)

- (REF DART SPEC. M-DELRIN-R1.250)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES



D3121-241 BEARING ASSEBLY (SCALE 1:1)

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MAIN INDUSTRIAL SALES LTD.

1475 TESSIER ST.

HAWKESBURY ON K6A 3S6

Phone: (613) 632-3595 Ext. Fax: (613) 632-0262

sales@mainindustrialsales.com

Packing Slip A DATE October 10, 2013
NUMBER 0000166536

NUMBER 0000166536 CUSTOMER NO. DART

BILL TO:

DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY ON K6A 1K7 SHIP TO:

DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY ON K6A 1K7

(613) 632-5200 Ext.

(613) 632-5200 Ext.

P.O. NUMBER	SALESPERSON	ORDER DA	TE REQ. DATE	ORDER NUMBER	
21664	EB	10-Oct-13		0000166536	
F.O.B.	SHIP VIA	SHIP VIA OUR TRUCK / LOCAL		TERMS	
F.O.B. value	OUR TRUCK / LOCAL			NET 30 DAYS	
PART NUMBER			σ'n	QUANTITY REQ. SHIPPED B.O.	
DESCRIPTION	LOCATION	UON	REQ. SI		
0-69002ZKML KML BALL BEARING	6D6	EA	60	60	
YOUR PART # : 6900ZZ	and the second s	سيدري الدين المنتبع المنتث أأأأ والحول أ			
			573-10		
		,	-0.10		
			42/2		
			ノ`		
ē.					
·					



Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7

Tel: 613 632 9577 Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO21664

Purchase Order Date 10/10/2013 **PO Print Date** 10/10/2013

Page Number 1 of 1

Order From:

MAIN INDUSTRIAL SALES LTD.

1475, TESSIER HAWKESBURY, ON K6A 3S6 CA VC-MAI001

Ship To: DART AEROSPACE LTD

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

CANADA



Contact Name

Vendor Phone

Ship To Contact

Ship To Phone

613 632 3595

Buyer

Chantal Lavoie

Customer POID

Customer Tax #

10127-2607

Terms Currency Net 30 CAD

ron

 λD

Ship Via: Ship Acct: Yours ppd

FOB

FCA - (Free Carrier)

Line Nbr	Reference Vendor Part Number Line Comments Delivery Comments	Description/ Mfg ID	Req Date/ (Taxable Promise Date	CD Req Qt Unit o Measu	of	PO Unit Price	Extended Price
1,	6900ZZ	Bearing	10/11/2013	60.0	00	\$1.62	\$97.20
			Yes 10/11/2013	Eac	ch	()	
	AS PER DWG D3121 REV. E B108218			1	2	10~11	
	er en e En en en en er en				1		

Line Total:

\$97.20

PO Total:

\$97.20

Note: Pricing listed above is as per contract agreement between Dart Aerospace and the respective manufacturer.

NO

No substitution or deviation without consent.

Certificate of Conformity or Material Certification required YES

PST# 6122-5207

Change Date:

10/10/2013

Change Nbr:

1

ge Date: 10/10